INDIANA STATE POLICE
LABORATORY DIVISION

2021 ANNUAL REPORT

"The Indiana State Police Laboratory Division's strategic plan is to provide quality and timely crime laboratory services as required and expected by the client agencies we serve; accomplished by integrating new technologies, facilities upgrades, and continuing education toward advancements in the identification, collection, storage, and analysis of physical evidence, as well as in polygraph and photography services."

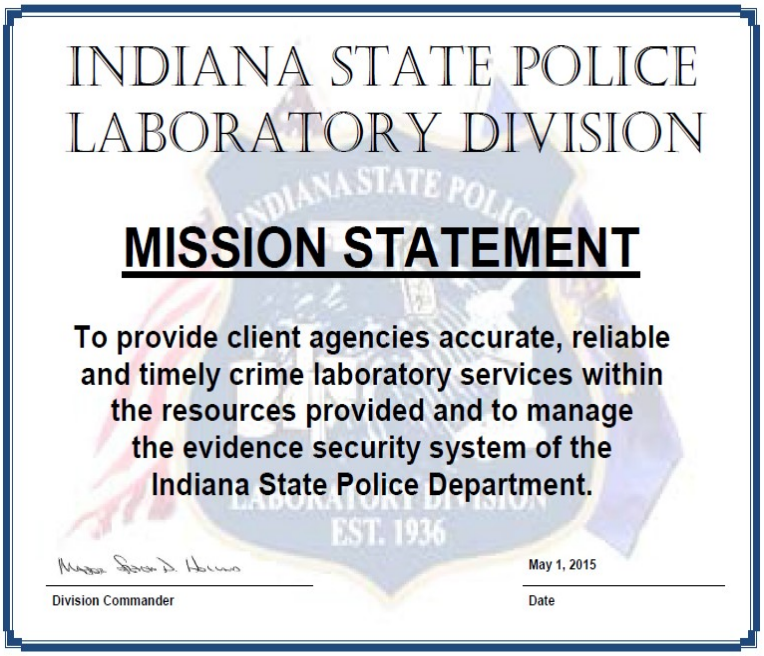
– Major Steven D. Holland, Laboratory Division Commander

Laboratory Division

Since its inception in 1936, the mission of the Laboratory Division is "to provide client agencies accurate, reliable, and timely crime laboratory services within the resources provided, and to manage the evidence security system of the Indiana State Police Department." Toward these ends, in 2021 the Laboratory Division received 25,917 cases, issued reports for 25,346 laboratory cases completed, worked 731 investigations involving 1,124 crime scenes, conducted 710 polygraph examinations, and secured over 370,000 items of evidence.

The Laboratory Division is organized into five sections: Biology, Chemistry, Comparative Science, Crime Scene Investigations, and Management Support. The Biology Section consists of Serology, DNA, and CODIS (Combined DNA Index System). The Chemistry Section consists of the Drug Unit and the Microanalysis Unit. The Comparative Science Section consists of the Firearms Unit (including Integrated Ballistics Identification System or IBIS), the Latent Print Unit (including Automated Fingerprint Identification System or AFIS), and the Document Unit. Crime Scene Investigations Section consists of the Crime Scene Investigators and the District Evidence Clerks. Management Support Section includes the Laboratory Managers, the Regional Laboratory Evidence Clerks, and staff from the Laboratory Information Management System/Information Technology (LIMS/IT) and Polygraph Units. The last two pages of this report provides the Division's organizational structure and contact information.

The Laboratory Division accepts evidence associated with active criminal investigations for analysis at four Regional Laboratory locations - Evansville, Fort Wayne, Indianapolis, and Lowell. The four Regional Laboratories have been accredited since 1991. The Laboratory Division is accredited by American National Standards Institute (ANSI) National Accreditation Board (ANAB).



INDIANA STATE POLICE
LABORATORY DIVISION

MISSION STATEMENT

To provide client agencies accurate, reliable and timely crime laboratory services within the resources provided and to manage the evidence security system of the Indiana State Police Department.

Division Commander

May 1, 2015
Date

ANAB
ANSI National Accreditation Board

CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Indiana State Police Laboratory Division

Fulfills the requirements of

ISO/IEC 17025:2017
ANAB Forensic Testing & Calibration AR 3125:2019
FBI Quality Assurance Standards for Forensic DNA Testing Laboratories:2020
FBI Quality Assurance Standards for DNA Databasing Laboratories:2020

In the field of

Forensic Testing

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

Pamela L. Sale, Vice President, Forensics

Expiry Date: 30 June 2025
Certificate Number: FT-0132

ANAB
ANSI National Accreditation Board
ilac-MRA

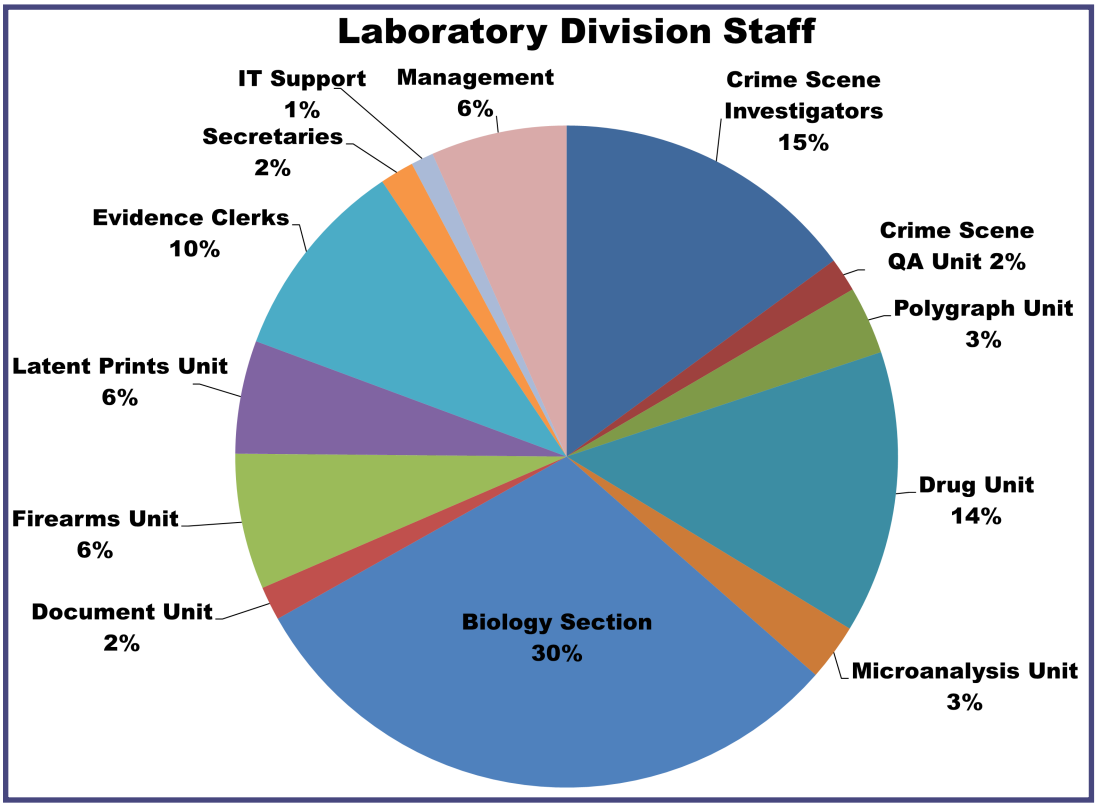
Staffing

Approximately 62% of the Forensic Scientists are certified by a forensic organization. These organizations include the American Board of Criminalists; American Board of Forensic Document Examiners; Association of Firearm and Toolmark Examiners; or International Association of Identification. All the Crime Scene Investigators are certified by the Indiana Law Enforcement Training Board.

The Laboratory Division's personnel are also members in forensic organizations, to include individuals holding office or working on committees. These organizations include:

- American Academy of Forensic Sciences
- American Association of Police Polygraphists
- American Chemical Society
- American Polygraph Association
- American Society of Crime Laboratory Directors
- American Society of Questioned Document Examiners
- American Society of Trace Evidence Examiners
- Association for Crime Scene Reconstruction
- Association of Firearm and Toolmark Examiners
- Association of Forensic Quality Assurance Managers
- Clandestine Laboratory Investigating Chemists
- Indiana Division of the International Association for Identification
- Indiana Polygraph Association
- Illinois Association of Property and Evidence Managers
- International Association for Identification
- Midwestern Association of Forensic Scientists
- Organization of Scientific Area Committees

At the end of 2021, the Laboratory Division employed 181 individuals providing analytical and support services. Over 90% of the Laboratory Division personnel are directly involved in collecting, maintaining, and/or analyzing evidence. The "Laboratory Division Staff" chart below details the distribution of the staff.



Types of Crimes and Requesting Agencies

The four Regional Laboratories provide forensic services at no charge to federal, state, county, and local agencies throughout Indiana.

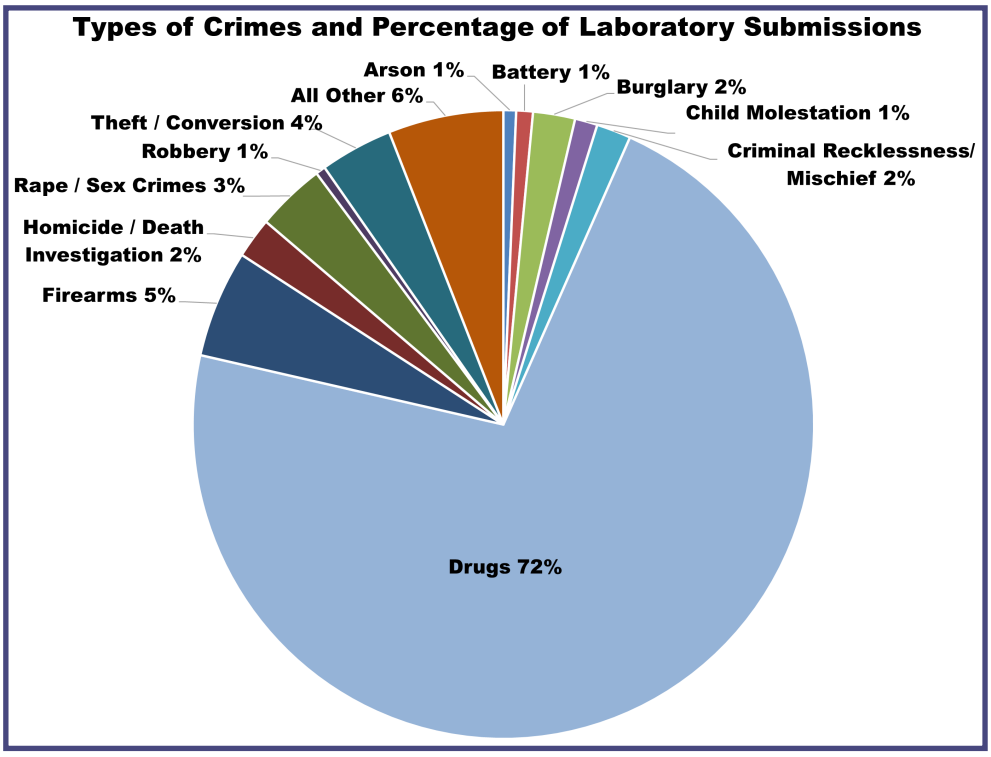
These services include tests for forensic biology/DNA and maintenance of the state's DNA database, identification of controlled substances, firearms and toolmarks, latent prints, questioned documents, and trace evidence examinations. The Laboratory Division also provides polygraph examinations and crime scene investigations upon request.

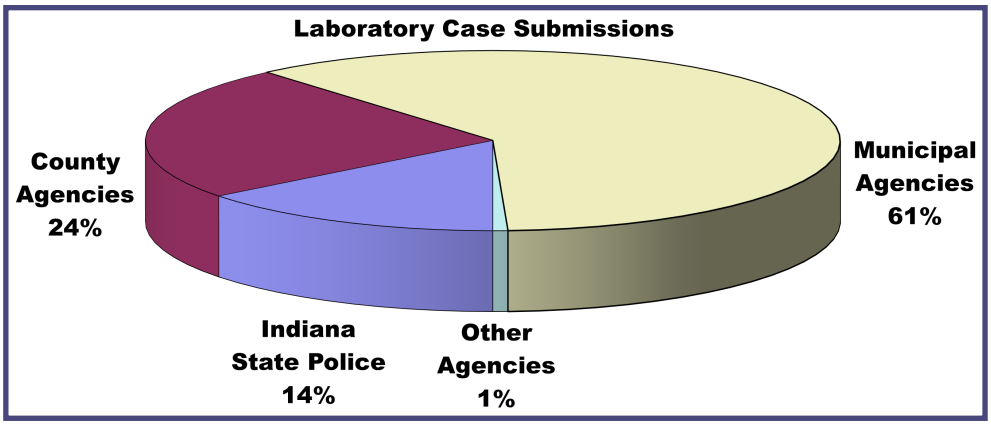
The Laboratory Division received 25,917 new cases for analysis in 2021. Crime Scene Investigators responded to and worked 731 investigations involving 1,124 different crime scenes, and the Polygraph Unit conducted 192 polygraph tests in criminal cases during 2021.

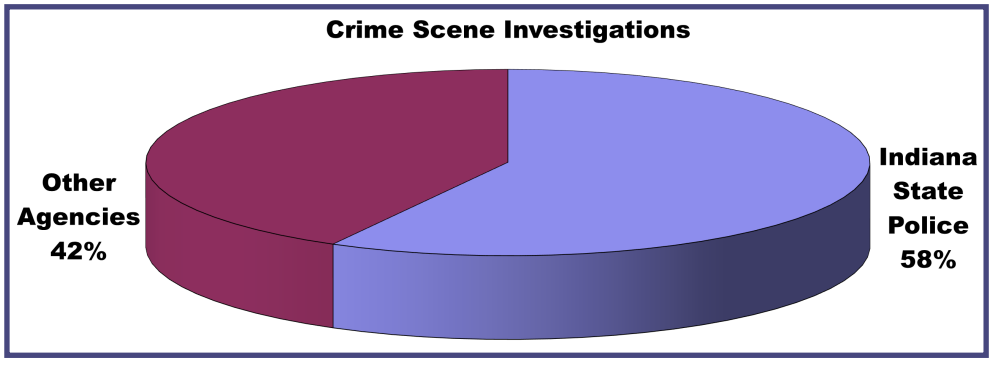
The chart to the upper right shows the types of crimes and percentages submitted to the Regional Laboratories in 2021.

As shown in the "Laboratory Case Submissions" chart, the majority of cases for analysis were submitted by municipal agencies.

The "Crime Scene Investigations" chart shows that over half of the crime scene investigations were completed for the Indiana State Police.

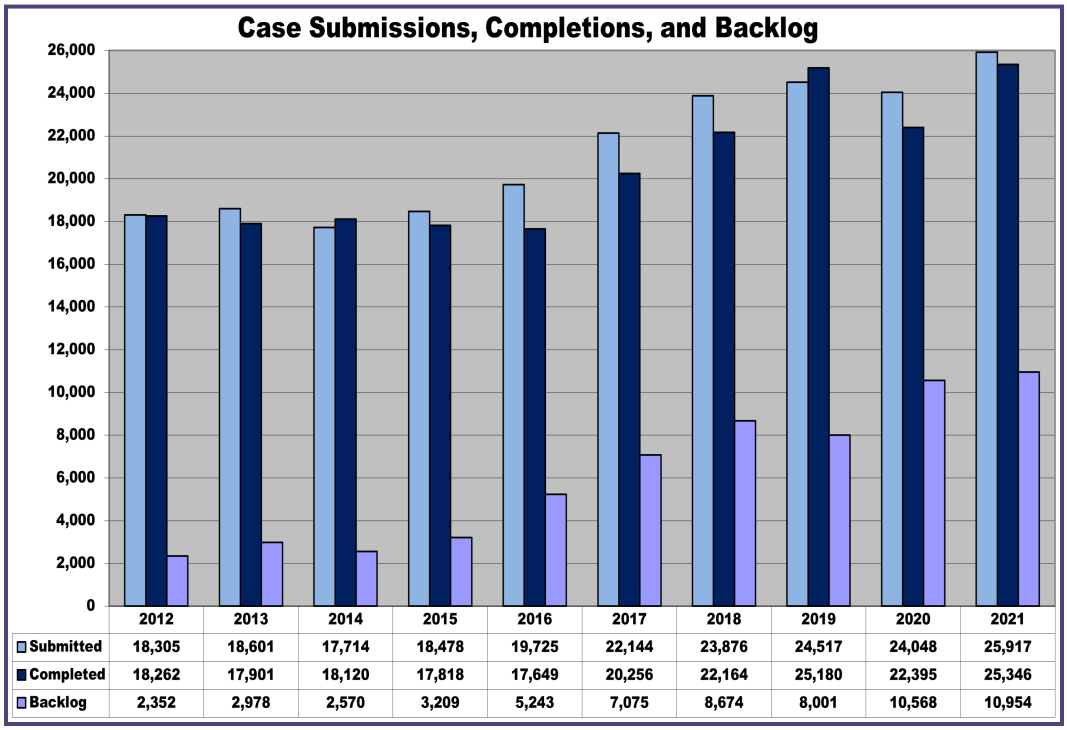






Case Submissions, Completions, and Backlog

As shown in the "Case Submissions, Completions, and Backlog" graph to the right, the Laboratory Division received 25,917 cases and completed 25,346 cases in 2021. The backlog is defined as any case submitted that has not been completed.



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Submitted	18,305	18,601	17,714	18,478	19,725	22,144	23,876	24,517	24,048	25,917
Completed	18,262	17,901	18,120	17,818	17,649	20,256	22,164	25,180	22,395	25,346
Backlog	2,352	2,978	2,570	3,209	5,243	7,075	8,674	8,001	10,568	10,954

The aging laboratory conditions at the Evansville, Fort Wayne, and Lowell facilities, as well as the continued increase in drugs and firearms submissions received for analysis, continue to negatively affect the backlog and operations of the laboratory system. In summer of 2017, the Indiana State Police was allocated funding to be used for capital improvement projects at the Evansville, Fort Wayne, and Lowell Regional Laboratories. In 2021, construction was nearly completed at Fort Wayne and commenced at Lowell (photos below and on next page). The project at Lowell is scheduled to be completed in 2023, and the start of construction at Evansville is anticipated to begin soon after.

Photo: New Fort Wayne Post and Regional Laboratory

Regional Laboratory Construction

Photo: Laboratory space in the new Fort Wayne Regional Laboratory

Photo: Walls going up at the new Lowell Post and Regional Laboratory facility

Regional Laboratories

All four of the Regional Laboratories provide analysis in Biology, Drugs, Firearms, and Latent Prints. Microanalysis (Trace) and Document examinations are only performed at the Indianapolis Regional Laboratory. The 2021 case submissions, completions, and backlog at the four Regional Laboratories are shown in the three tables below. For operational efficiency, cases are routinely transferred among Regional Laboratories.

Submissions

	Evansville	Fort Wayne	Indianapolis	Lowell	Totals
Biology	398	174	3,283	435	4,290
Documents	0	0	39	0	39
Drugs	1,845	2,760	9,062	2,497	16,164
Firearms	385	1,149	2,164	661	4,359
Latent Prints	291	154	254	127	826
Trace	0	0	239	0	239
Totals	2,919	4,237	15,041	3,720	25,917

Completions

	Evansville	Fort Wayne	Indianapolis	Lowell	Totals
Biology	375	176	3,180	429	4,160
Documents	0	0	29	0	29
Drugs	2,459	2,151	7,536	2,421	16,823*
Firearms	435	818	1,290	662	3,205
Latent Prints	329	188	245	140	902
Trace	0	0	227	0	227
Totals	3,598	3,333	12,507	3,652	25,346

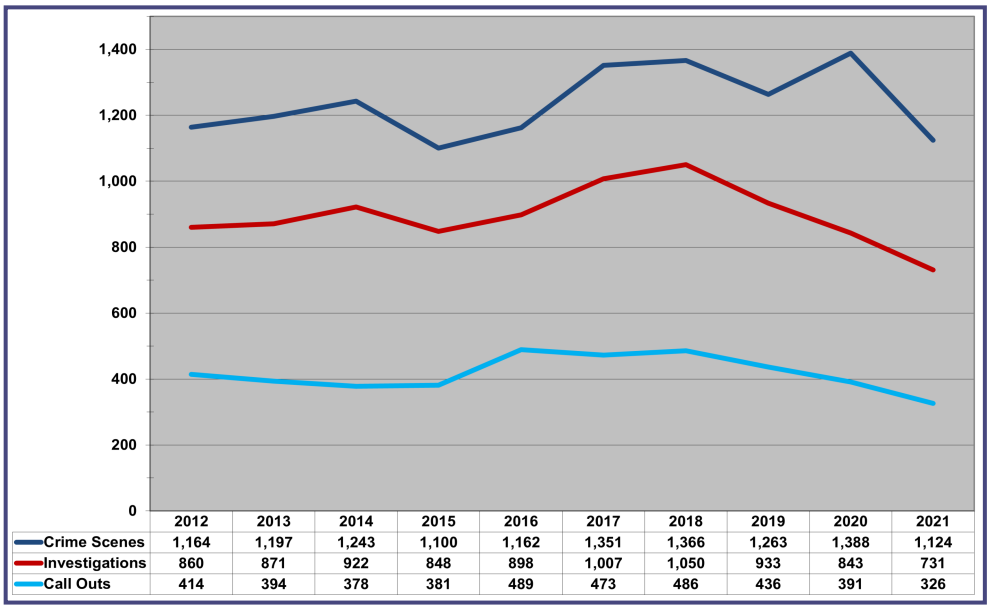
*** The cases analyzed include 10,678 cases that were tested and 3,889 cases administratively withdrawn. An additional 2,256 cases were completed by outsourcing to a contracted accredited laboratory.**

Backlog

	Evansville	Fort Wayne	Indianapolis	Lowell	Totals
Biology	47	19	843	53	962
Documents	0	0	23	0	23
Drugs	304	1,941	4,202	1,097	7,544
Firearms	18	695	1,414	179	2,306
Latent Prints	9	13	51	12	85
Trace	0	0	34	0	34
Totals	378	2,668	6,567	1,341	10,954

Crime Scene Investigation

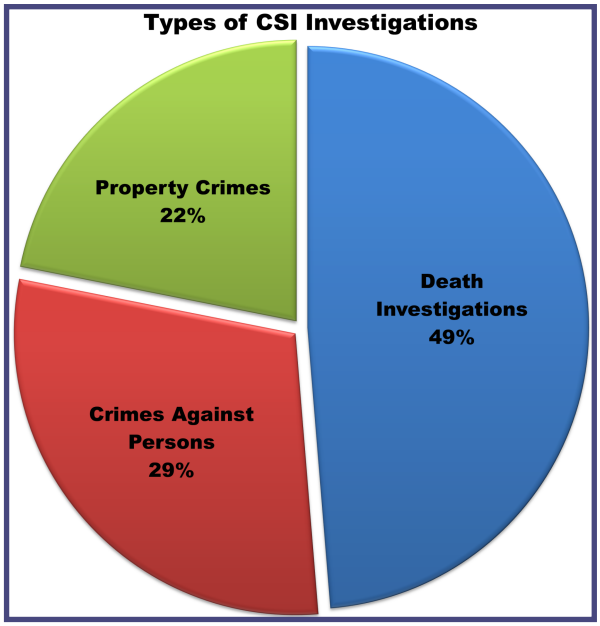
Crime Scene Investigators (27 staff), when requested by local, state, and federal law enforcement agencies, respond to scenes, 24 hours a day, seven days a week anywhere in Indiana. Services provided include documenting the crime scene, identification, collection, and packaging potential evidence, reconstructing the events of the crime, bloodstain pattern analysis, and three-dimensional (3D) laser scanning. In 2021, the CSIs worked 731 investigations involving 1,124 crime scenes, were called out 326 times outside of normal business hours, and testified 41 times. Seventy-eight crime or crash scenes were documented using a 3D scanner. As shown in the chart below, almost half of the scenes worked during 2021 were death investigations. During 2021, the CSIs investigated 198 shooting incident scenes that included 46 officer involved shootings.



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Crime Scenes	1,164	1,197	1,243	1,100	1,162	1,351	1,366	1,263	1,388	1,124
Investigations	860	871	922	848	898	1,007	1,050	933	843	731
Call Outs	414	394	378	381	489	473	486	436	391	326

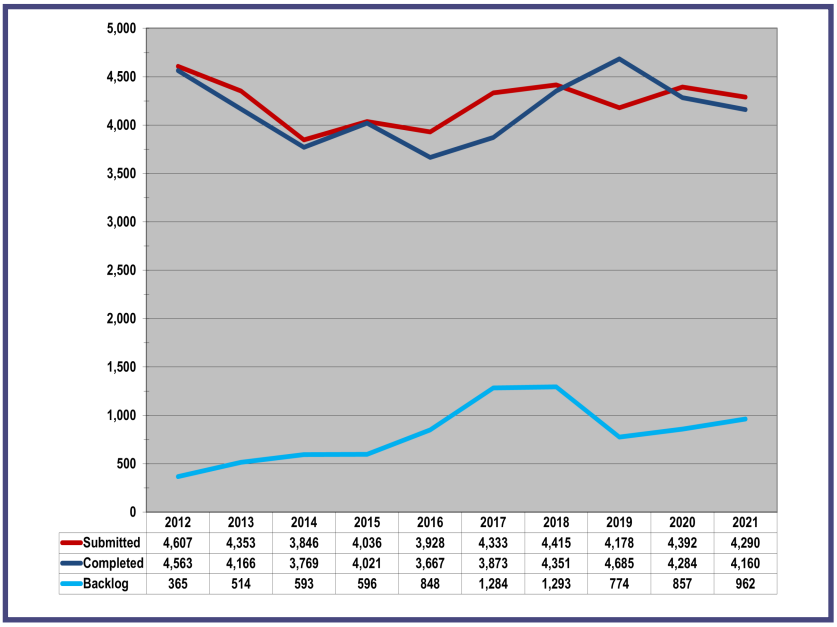
The Section is active in the forensic community by participating in the Association for Crime Scene Reconstruction (ACSR) and the Indiana Division of the International Association for Identification (IN IAI).

The new facility at Fort Wayne includes an evidence processing garage bay, as shown in the photo below, that will allow CSIs to examine vehicles in a more controlled environment. CSIs also have access to evidence processing and packaging rooms, neither of which are available in the current building.



Biology Section

The Biology Section (57 staff) is organized into four casework units, plus the Combined DNA Index System (CODIS) Unit. The Section conducts analysis of biological samples including identification of body fluids (serology), nuclear and Y-STR DNA analysis, forensic relationship tests, bloodstain pattern analysis, DNA analysis of offender samples, and searches of the offender database for matching profiles. In 2021, the Section completed 4,160 cases and 4,290 cases were submitted. The backlog was 962 at the end of 2021.



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Submitted	4,607	4,353	3,846	4,036	3,928	4,333	4,415	4,178	4,392	4,290
Completed	4,563	4,166	3,769	4,021	3,667	3,873	4,351	4,685	4,284	4,160
Backlog	365	514	593	596	848	1,284	1,293	774	857	962

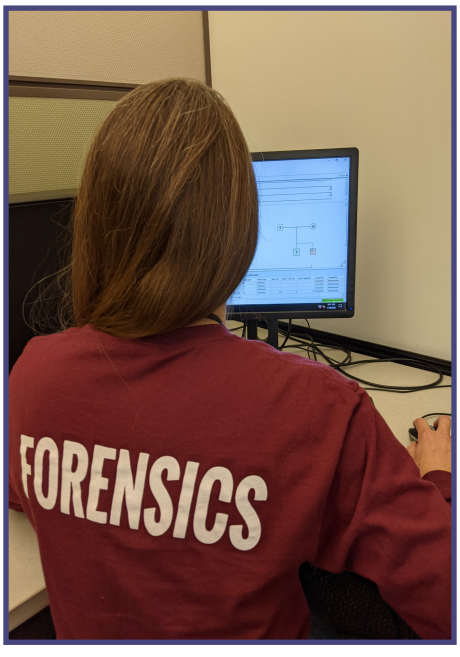
In 2021, the four Indiana State Police Regional Laboratories plus the Indianapolis Marion County Forensic Services Agency entered approximately 1,300 crime scene profiles into CODIS. As a result of these efforts, a total of 807 separate criminal investigations were aided via CODIS during 2021 with the type of hits shown in the chart to the right. To date 9,724 investigations have been aided by the Indiana CODIS program. During 2021, more than 20,000 samples from previously untested offenders were submitted to the Laboratory Division. These samples were analyzed and entered into the database with an average turnaround time of seven days from receipt to database entry.

CODIS Hit Type	Hits
National Forensic	18
National Offender	215
State Forensic	18
State Offender	609
2021 Total	860

Research in the field of forensic DNA continues to develop new tools to solve crimes and aid in the identification of human remains. The Biology Section is pursuing three of these new technologies.

The validation of next generation sequencing using the MiSeq instrument continued in 2021. This technology can be used to obtain additional information from difficult samples, such as from degraded evidence.

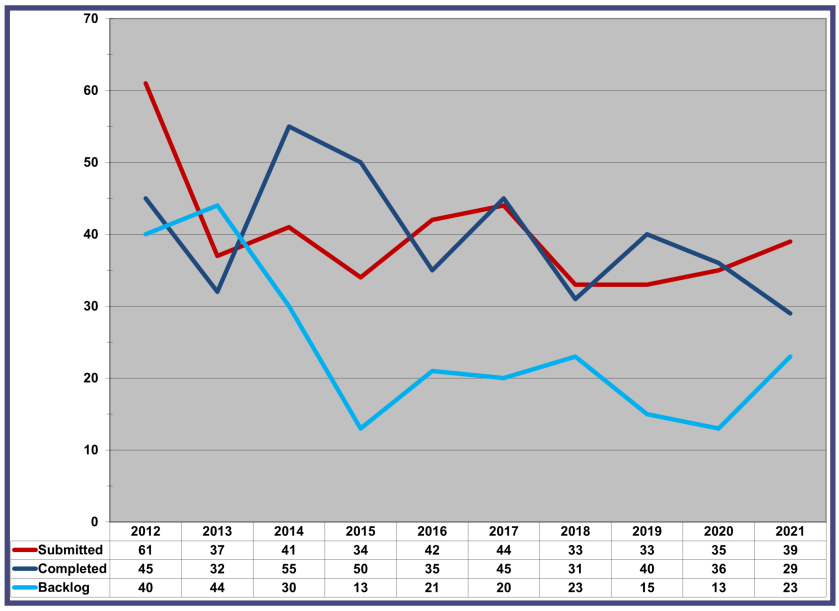
Familial searching software is now available in CODIS (as shown in the photo to the right). A validation of familial searching was initiated in 2021. To solve additional cases, this software will search the CODIS database for additional DNA links to family members of individuals in the database.



Laboratory Division took its first step into Rapid DNA technology, by initiating the purchase of a Rapid DNA instrument. This technology will allow the Biology Section to support efforts to identify victims of mass disasters. Rapid DNA was recently used to identify victims of tornados in Kentucky, the apartment building collapse near Miami, Florida, and wildfires in the California.

Document Unit

The Document Unit (3 staff) performs a range of examinations in order to answer questions about the authorship, authenticity, and background of documents. Examinations include: the comparison of handwriting, hand printing, and signatures to known writing in order to identify or eliminate a subject as the writer; the development and decipherment of indented writing impressions; physical match examinations of torn, cut, or shredded documents; the classification and comparison of inks and writing instruments; the examination of printing processes to determine source or authenticity; detection of alterations, additions, deletions, or substitutions; decipherments of altered, erased, obliterated, charred, or water soaked documents; and the determination of the sequence of events in the creation of a document. The Unit also maintains a Robbery Note Reference Collection to search for similarities to other robbery notes.



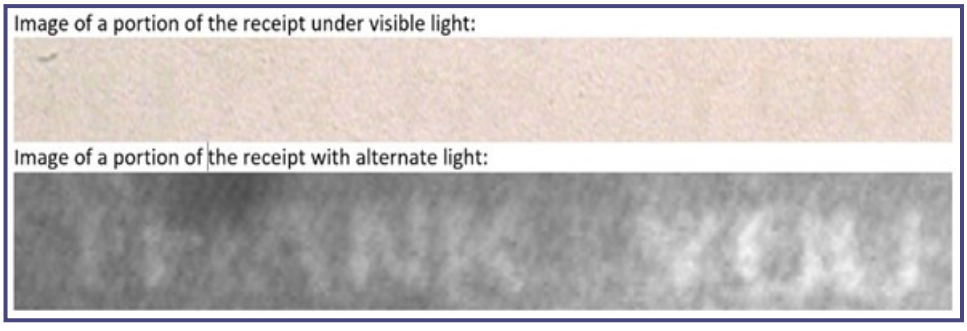
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Submitted	61	37	41	34	42	44	33	33	35	39
Completed	45	32	55	50	35	45	31	40	36	29
Backlog	40	44	30	13	21	20	23	15	13	23

The Document Unit completed 29 cases in 2021 and received 39 cases, which included ten electronic submissions. At the end of 2021 the backlog was 23. During 2021, casework primarily focused on handwriting examinations. The types of investigations aided varied, for example: theft of an aircraft, serial stalking, an anonymous letter regarding a death investigation, robberies, voter fraud, drug logs, and car titles.

Members of the Document Unit are active in the forensic community by participating in the American Board of Forensic Document Examiners (ABFDE), American Society of Questioned Document Examiners (ASQDE), and the Midwestern Association of Forensic Scientists (MAFS). One member of the Unit completed the ABFDE certification process during 2021.

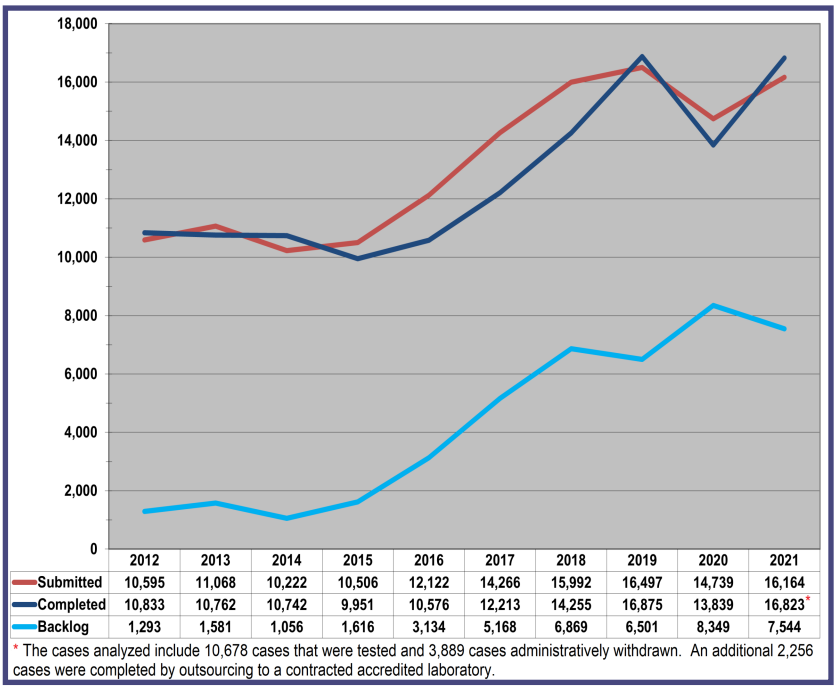
In September 2021, the Document Unit provided a four-hour training class on forensic document examinations to over fifty attendees from multiple State agencies that included the Secretary of State, Bureau of Motor Vehicles, Inspector General, Attorney General, Family and Social Security Administration, Department of Insurance, and more. This was one of the first in-person training session provided by the Laboratory Division since the beginning of the COVID-19 pandemic.

An uncommon examination occurred during 2021 when the Unit analyzed a cash register receipt with the printed text completely obscured. With the use of microscopy, side lighting, and alternate light sources, approximately 90% of the original text was deciphered as shown in photo to the right.



Drug Unit

The Drug Unit (25 staff) identifies controlled substances, non-controlled drugs of abuse, clandestine laboratory samples, and diluent materials found in drug preparations. During 2021, the Unit completed analysis of 10,678 cases and 3,889 cases were administratively withdrawn because those cases were adjudicated prior to testing. In addition, 2,256 cases were completed by outsourcing to a contracted accredited laboratory, which increased the total number of cases with a completion designation within the laboratory to 16,823 cases.

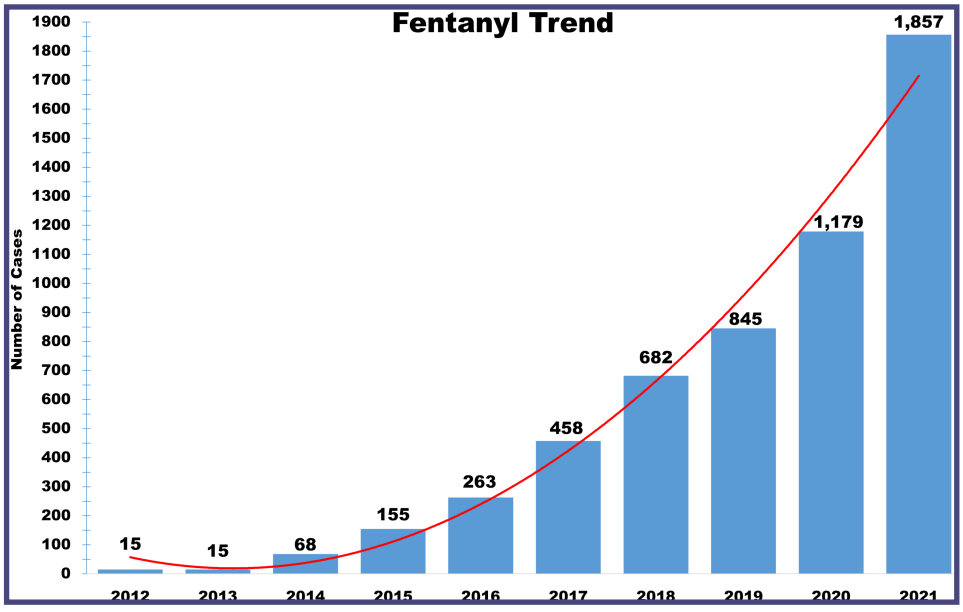


	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Submitted	10,595	11,068	10,222	10,506	12,122	14,266	15,992	16,497	14,739	16,164
Completed	10,833	10,762	10,742	9,951	10,576	12,213	14,255	16,875	13,839	16,823*
Backlog	1,293	1,581	1,056	1,616	3,134	5,168	6,869	6,501	8,349	7,544

* The cases analyzed include 10,678 cases that were tested and 3,889 cases administratively withdrawn. An additional 2,256 cases were completed by outsourcing to a contracted accredited laboratory.

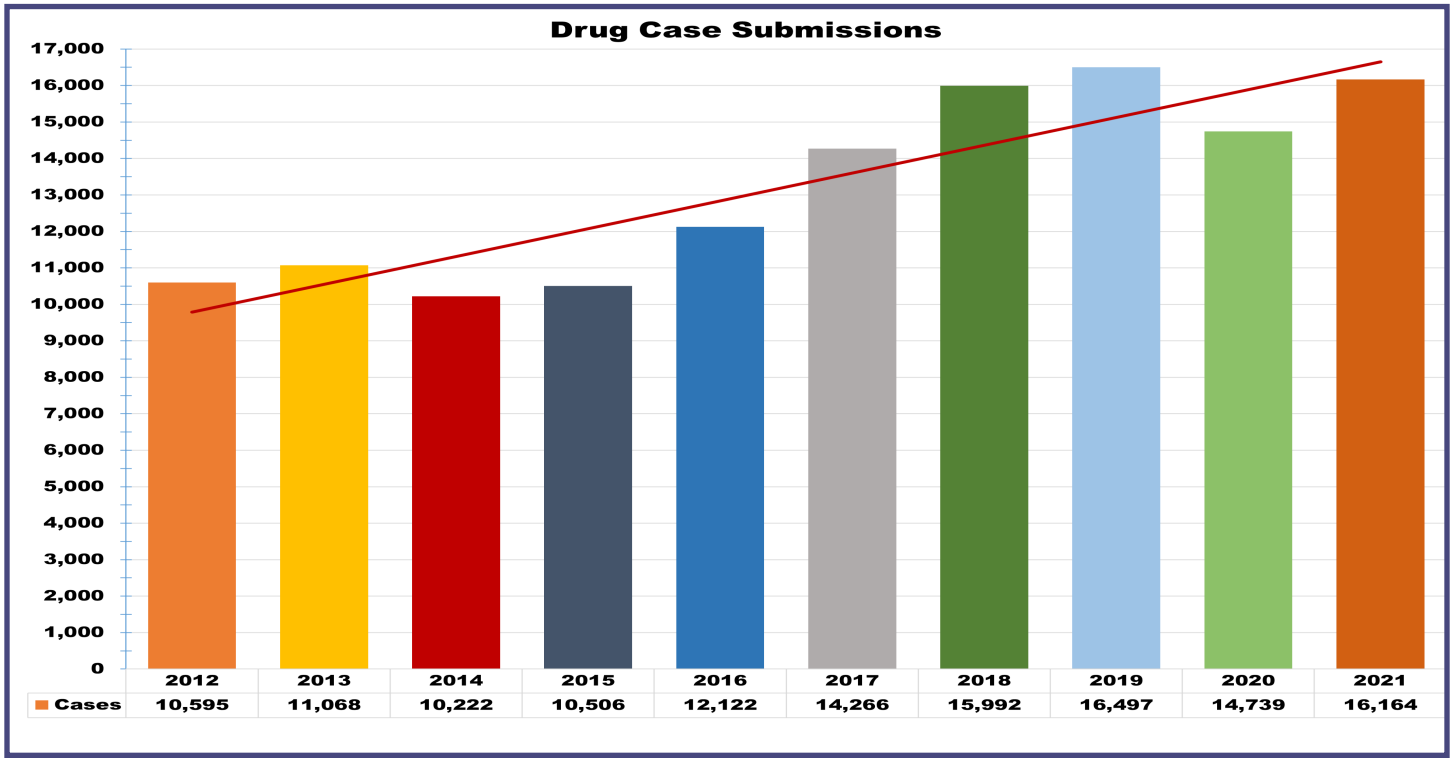
In 2021, the Drug Unit received 16,164 cases, which is 62% of the total cases submitted to the Laboratory Division. Drug submissions increased 10% in 2021, from 2020 (see "Drug Case Submissions" graph on page 12).

While the goal of the Laboratory Division is to complete 90% of the case submissions in 45 days, the drug backlog situation caused an increase in the Drug Unit turnaround time to an average of nearly 7 months. In response, the Laboratory Division implemented a multi-faceted approach to reduce the backlog and to ensure the increasing turnaround times for completions do not hinder the criminal justice system. First, the Indiana State Police (ISP) is moving forward with the design and construction of new laboratory facilities in Evansville, Fort Wayne, and Lowell, as described on page 5. These new facilities allow for the hiring of additional forensic scientists. The current buildings lack adequate space to support additional staff and necessary instrumentation, which significantly limits case production capabilities. Second, beginning in January 2020, as a stop gap measure, the ISP contracted with the Miami Valley Regional Crime Laboratory in Dayton, Ohio, to outsource a portion of the backlogged drug cases for analysis. This outsourcing project is a short term measure and will be utilized, as funding allows, until such time as the new laboratories are constructed and operational to support the additional staff needed to meet the Laboratory Division's submission demands.

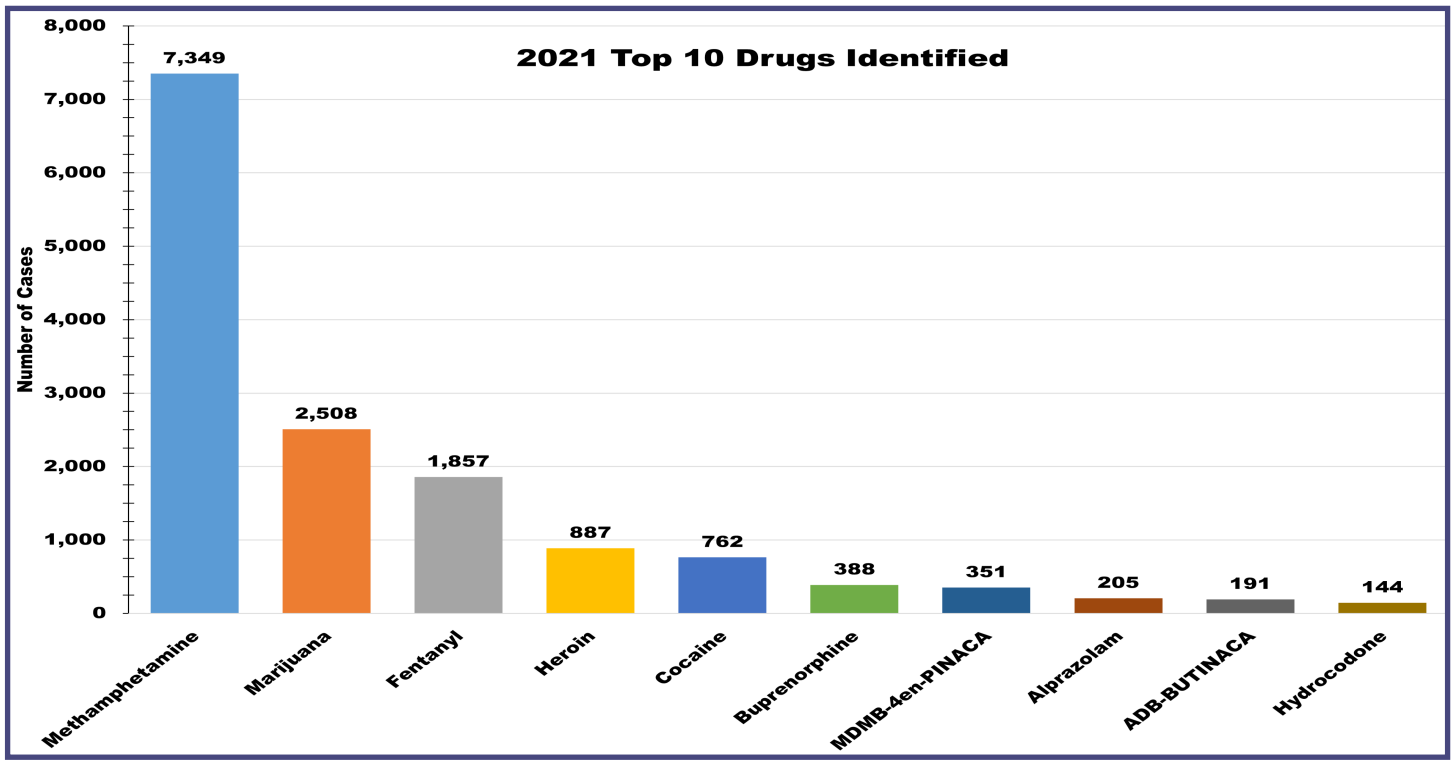


The number of Fentanyl related compounds submitted increased from 1,179 in 2020 to 1,857 cases during 2021 (as shown in graph to the right). Fentanyl and related compounds also negatively impacted case completion due to the additional safety precautions required to analyze these types of cases.

Drug Unit

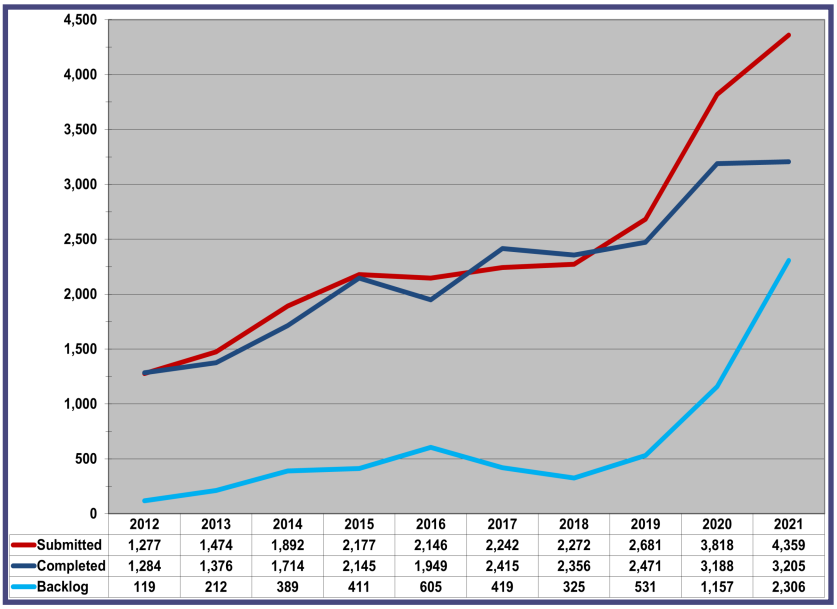


The top five drugs identified in 2021 were Methamphetamine, Marijuana, Fentanyl, Heroin, and Cocaine, as shown in the "2021 Top 10 Drugs Identified" chart below. For the first time, Fentanyl surpassed both Heroin and Cocaine.



Firearms Unit

The Firearms Unit (12 staff) conducts comparison and identification of fired bullets and cartridge cases. The Unit also performs characterization of recovered ammunition components, function testing of firearms, examination and comparison of toolmark evidence, Integrated Ballistics Identification System (IBIS) database entry and inquiry for unsolved firearms related cases, muzzle to target distance determination, and serial number restoration. Members of the Unit also participate on the Superintendent's Advisory Committee on Firearms and Ammunition Selection by evaluating new firearms and ammunition for future procurement by the Indiana State Police Department.



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Submitted	1,277	1,474	1,892	2,177	2,146	2,242	2,272	2,681	3,818	4,359
Completed	1,284	1,376	1,714	2,145	1,949	2,415	2,356	2,471	3,188	3,205
Backlog	119	212	389	411	605	419	325	531	1,157	2,306

In 2021, the Firearms Unit worked 3,205 cases while receiving 4,359 cases, and had a backlog of 2,306 at the end of the year. The construction of a new laboratory facility in Fort Wayne, as previously noted on page 5, will provide more analytical work space that will allow for the hiring of additional forensic scientists in the Firearms Unit to help address the rising case submissions and backlog.

The Firearms Unit assisted law enforcement agencies by linking firearms related cases with 276 IBIS hits, as shown in the chart to the right. Only the Fort Wayne and Indianapolis Regional Laboratories perform IBIS examinations. Cases received at Evansville and Lowell requiring IBIS entry are transferred to Fort Wayne or Indianapolis.

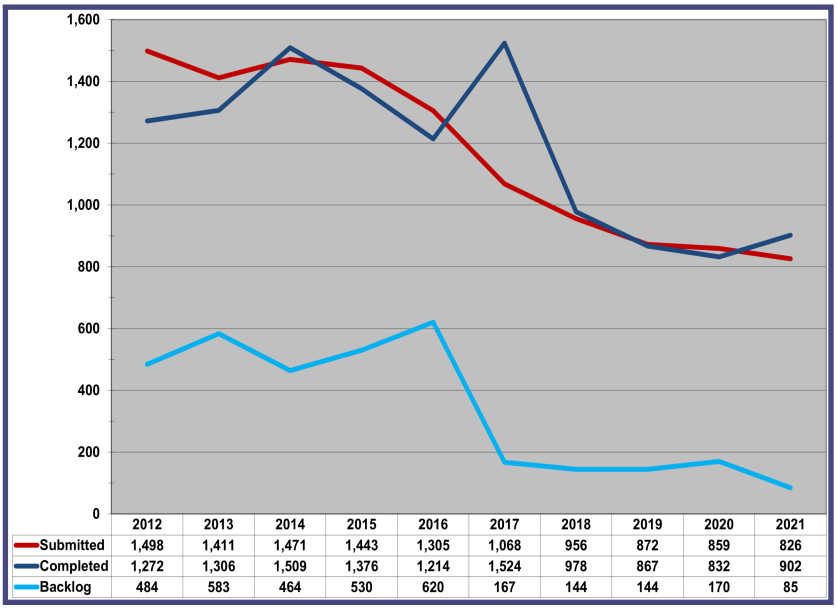
Regional Laboratory	Hits
Fort Wayne	102
Indianapolis	174
2021 Total	276

Effective December 1, 2021, the Firearms Unit begin outsourcing National Integrated Ballistic Information Network (NIBIN) correlations to the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) NIBIN National Correlation and Training Center (NNCTC). Under this agreement, the Firearms Unit will continue entering digital images of evidence from crime scene shootings and test fires from crime guns into the NIBIN through a local IBIS terminal. The database is searched for possible matches, that is, other ammunition that have similar tool marks and thus may have been fired from the same gun. A trained NIBIN user at NNCTC will review (correlates) the possible matches on a computer and will generate a notification memorandum when a "High Probability IBIS Hit" is identified as an investigative lead. These correlations typically take about 30 minutes each to complete. The investigating agency is responsible for returning the evidence to the Laboratory Division for confirmation of the hit. An examiner in the Firearms Unit will microscopically compare the evidence submitted to determine if, in fact, they were fired in the same firearm to confirm the match.

The Firearms Unit is active in the forensic firearms community with members participating in the Association of Firearm and Toolmark Examiners (AFTE), Organization of Scientific Area Committees (OSAC) Firearms and Toolmarks Subcommittee, and the NIBIN Users Conference.

Latent Print Unit

The Latent Print Unit (10 staff) examines and compares unknown to known dermal friction ridge detail, which is found on fingers, palms, and soles of feet. Processing techniques include physical, chemical, and fluorescent development of latent print evidence. When a case is submitted without a suspect, the unknown fingerprints are entered into the state's Automated Fingerprint Identification System (AFIS) and the Federal Bureau of Investigation's Next Generation Identification (NGI) databases. Potential candidates are generated by the system, but the comparison, identification, and verification processes are performed by forensic scientists. The Unit can access all friction ridge archive files from AFIS/NGI for comparison purposes. This access streamlines the process and allows the examiners to acquire the exact exemplar needed for comparison.



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Submitted	1,498	1,411	1,471	1,443	1,305	1,068	956	872	859	826
Completed	1,272	1,306	1,509	1,376	1,214	1,524	978	867	832	902
Backlog	484	583	464	530	620	167	144	144	170	85

During 2021, the Unit received 826 cases that included 140 electronic submissions, worked 902 cases, and entered 413 prints into AFIS and NGI with the number of hits shown in the table to the right. The backlog was 85 cases at the end of the year, which was half number of the previous year. The Unit assisted with 346 print identifications to confirm Combined DNA Index System (CODIS) hits. The Unit is active in the forensic community participating in the International Association for Identification (IAI) and the Indiana Division of IAI.

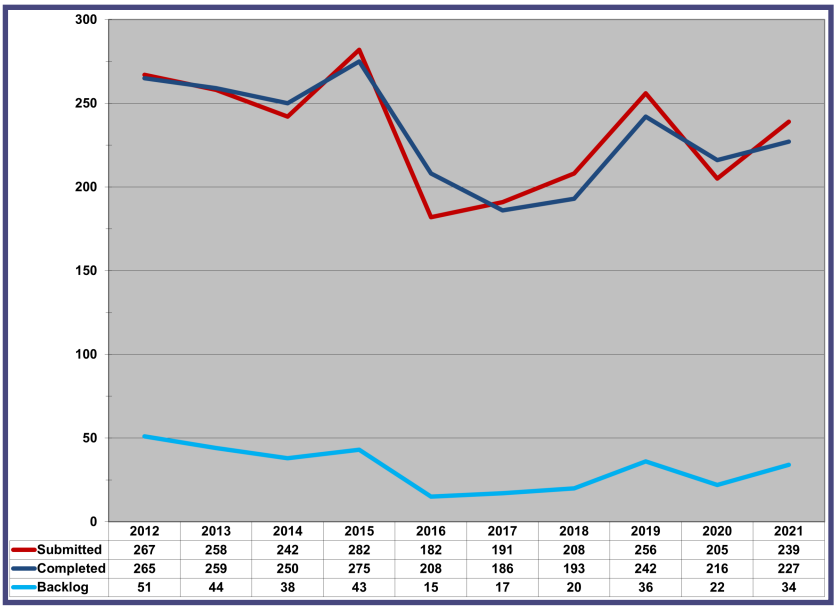
2021	Hits
AFIS	43
NGI	80
Total	123

In 2021, the Laboratory Division accepted electronic evidence submissions of digital images for latent print, document, or trace examination with 154 total submissions, a 13.4% increase from 2020. Electronic evidence for examination can be submitted at esubmission@isp.in.gov with a completed Request for Laboratory Examination Form, and for files too large to be emailed, a secure file sharing website can be set up by the Laboratory Division. It is anticipated that electronic submissions will continue to rise as awareness increases. Over 60% of all latent print submissions are lifts or photographs, which could be submitted electronically.

During 2021, the Latent Print Unit purchased a Full Spectrum Imaging System (FSIS) for the new Fort Wayne Regional Laboratory (photo to the right). The FSIS can capture a full handprint at 1000 ppi (pixels per inch) with a 16 megapixel digital camera and sensitivity in the ultraviolet (UV), visible, and infrared (IR) spectrums. Digital images of evidence can be obtained with consistent sensitivity and sharpness even on round or curved surfaces, such as a wine glass. Latent prints can be visualized and photographed without processing as well as post processing. Once implemented after moving into the new facility, the FSIS will increase the number of latent prints observed or developed and provide higher quality digital images of those latent prints.

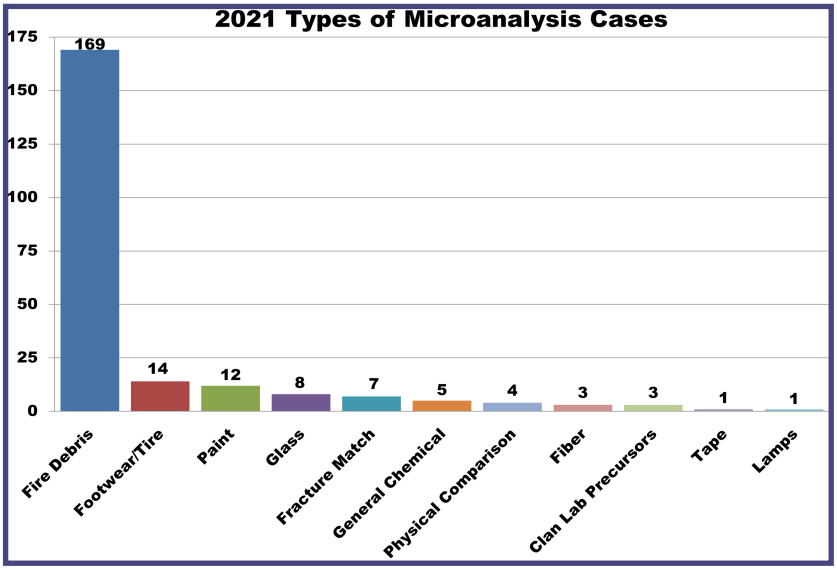
Microanalysis Unit

The Microanalysis (Trace) Unit (5 staff) performs analysis, comparison, and identification of automotive lamps, clandestine laboratory reagents, fibers, fire debris, footwear and tire impressions, glass, paints, plastics, safe insulation, tapes, and unknown materials. The Unit uses many different types of microscopes as well as analytical instrumentation to conduct examinations and comparisons in an effort to provide associative evidence. The Unit uses the SoleMate Footwear Print Identification System Footwear Print Expert (FPX). This system stores shoeprint sole patterns for reference. Footwear impressions recovered from crime scenes can be searched in FPX database to potentially identify a manufacturer of a shoe.



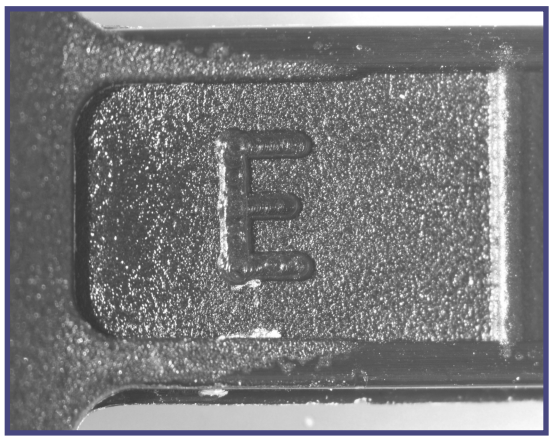
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Submitted	267	258	242	282	182	191	208	256	205	239
Completed	265	259	250	275	208	186	193	242	216	227
Backlog	51	44	38	43	15	17	20	36	22	34

In 2021, the Microanalysis Unit completed 227 cases and received 239 submissions, which included four electronic submissions. The backlog was 34 cases at the end of the year. The majority of cases worked during the year by the Unit were fire debris cases as shown in the graph to the right.



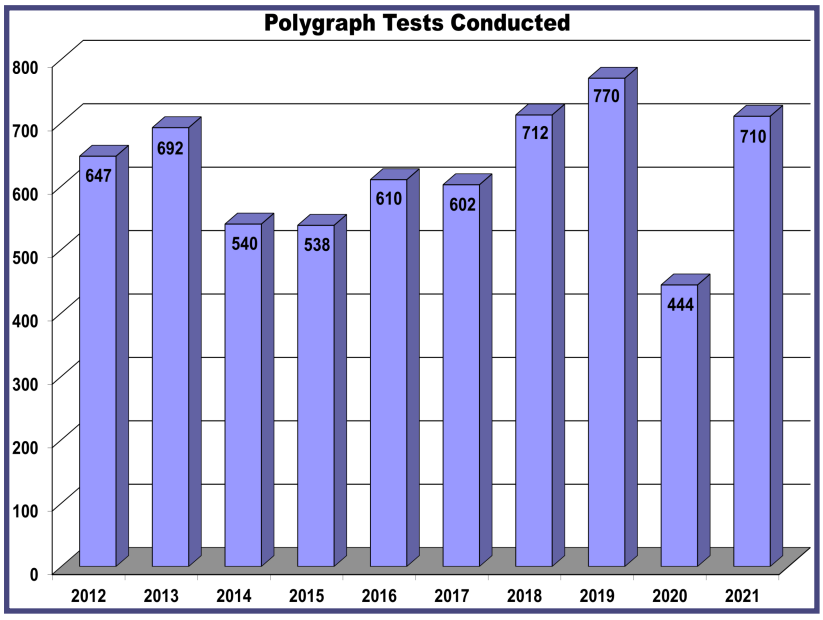
The Microanalysis Unit participates in the American Board of Criminalistics (ABC), American Society of Trace Evidence Examiners (ASTEE), Midwestern Association of Forensic Scientists (MAFS), and Organization of Scientific Area Committees (OSAC).

During 2021, the Microanalysis Unit examined a case in which two bank robbers zip tied employees' hands together and led them to the vault. After the robbery, the suspects fled the scene. A search of one of the suspect's residence found an open package of black zip ties with several missing. The zip ties from the scene of robbery were compared by the Unit to the zip ties from the suspect's residence. Multiple zip ties from the residence shared microscopic mold markings (shown in photo to right) with those from the robbery indicating that the zip ties were made by the same machine and mold. The analyst testified during trial in federal court that resulted in the suspect being found guilty.



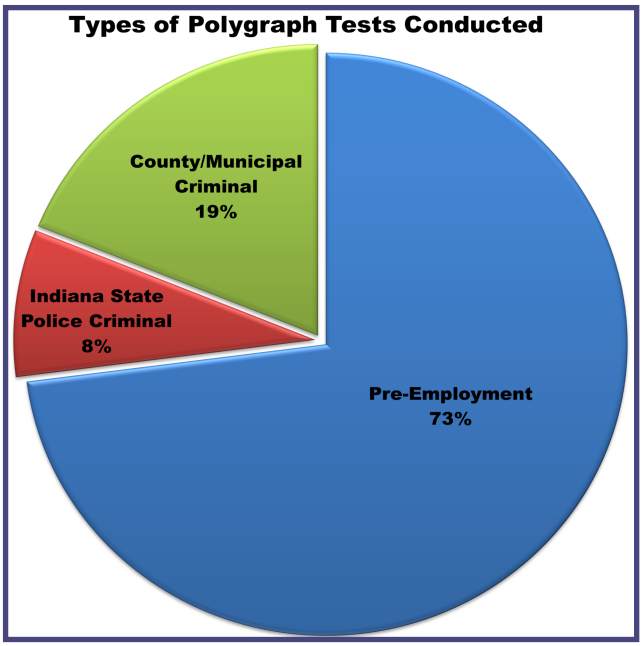
Polygraph Unit

The Polygraph Unit (6 staff) provides polygraph examinations in criminal investigations to the Indiana State Police (ISP) and other state, county, and local law enforcement agencies. The Unit also conducts pre-employment testing for Indiana State Police positions including Capitol Police, Evidence Clerk, Fusion Center employees, Motor Carrier Inspector, and Trooper. In addition to these tests, the Polygraph Unit also performs pre-employment polygraph examinations for the Indiana Gaming Commission Enforcement Division and the Indiana State Excise Police.



The term polygraph literally means many writings. The name refers to the manner in which selected physiological activities are simultaneously measured and recorded by computerized instruments. A polygraph examiner interprets the charts of the physiological changes to determine deception and non-deception.

In 2021, the Polygraph Unit conducted a total of 710 polygraph examinations, which included 192 polygraph tests in criminal cases that resulted in 12 cleared cases, 14 additional leads developed, 30 confessions obtained, and 45 significant admissions received. The Unit conducted 518 pre-employment polygraphs, which is up from 263 conducted in 2020, returning to pre-COVID-19 pandemic examination numbers. The proportions of the tests conducted for pre-employment applicants, ISP criminal, and county/municipal agencies criminal are shown in the chart to the right.



The Polygraph Unit is active in the forensic community by participating in the American Association of Police Polygraphists (AAPP), American Polygraph Association (APA), and Indiana Polygraph Association (IPA).

The Polygraph Unit worked behind the scenes in many investigations and helped conclude several unique, as well as high profile cases. During 2021, the Unit was requested to perform a stipulated polygraph in the death of 11-month-old who was left in the care of a babysitter. The child was found un-responsive and later died from a skull fracture. The babysitter told several different stories to the investigators about what happened. After the suspect failed the polygraph test, the Polygraph Examiner questioned the suspect about the deceptive results. The suspect confessed to dropping the toddler on her head. Additional interviews by detectives from the investigating agency lead to a full confession. The suspect was found guilty and sentenced to 30 years in prison with appeals denied in the case.

Evidence Management

Evidence Clerks (18 staff) are responsible for tracking the chain-of-custody of evidence upon receipt into the Laboratory Division's possession, organizing storage of the evidence so it can be retrieved when needed, and the release or destruction of evidence as necessary. The Evidence Clerks securely maintain evidence at the 14 Indiana State Police (ISP) Districts and the Indianapolis Regional Laboratory. The three Districts located at Evansville, Fort Wayne, and Lowell also have a Regional Laboratory. The Evidence Clerks receive evidence at the Regional Laboratories from law enforcement agencies for forensic analysis and return it when testing is complete. The Unit is active in the forensic community by participating in the Illinois Association of Property and Evidence Managers (IAPEM) organization.

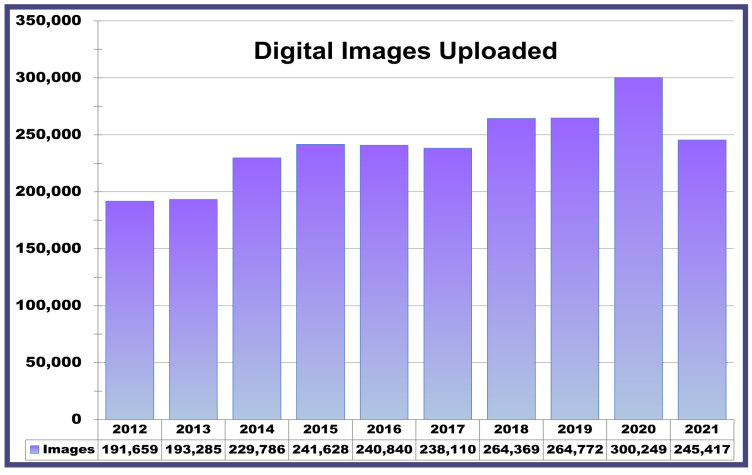
Evidence Clerks handled thousands of items of evidence throughout the year that included accepting 44,330 items from contributors at the Regional Laboratories for analysis. The Evidence Clerks received 26,223 additional items from ISP personnel for storage. In 2021, the Evidence Clerks were responsible for the storage of over 370,000 individual items of evidence and upon receiving disposition orders destroyed 22,515 items and released 4,554 items.

The Laboratory Division utilizes an electronic Request for Laboratory Examination Form. This form is dynamic with additional fields and/or pages appearing depending upon the information entered. The form is tailored to obtain only the information needed by each Unit, which reduces unnecessary, potentially contextually biasing information. The flexibility of the form allows each Unit to receive only the information needed. The Request for Laboratory Examination Form and an instructional PowerPoint® are available on the Laboratory Division's website (http://www.in.gov/isp/labs/2332.htm). The form is updated annually and includes an expiration date. Once expired, the form will lock to prevent the use of an obsolete version, and contributors are directed to the website to download the current version.

Photography Unit

In 2021, ISP transitioned to an online digital asset management system, Axon Evidence.com, for all Department criminal investigation and crash photos. ISP investigative personnel are responsible for uploading the photos they produce. With the retirement of the only Photo Technician, the Photo Unit was closed in 2021. Staff at the Indianapolis Regional Laboratory will continue to support the old digital storage system.

Prior to the transition to the new online system, the Photography Unit provided photography services for ISP investigation personnel and the ISP Public Information Office. The Unit also maintained a digital asset management system, Axon Commander®, for all Department criminal investigation and crash photos. Digital images were uploaded, cataloged, and archived for future reference from the 14 ISP Districts. In 2021, over 245,000 digital images were entered into the database, and more than 2.8 million images were added since the inception of the database in 2008. During 2021, the Photography Unit printed 103 investigative color prints and provided 334 CDs to investigators and insurance companies.



Quality Assurance & LIMS/IT Support

The **Crime Scene Investigations Quality Assurance Unit** (4 staff) administers training in crime scene investigation to local law enforcement agencies as well as Indiana State Police (ISP) Crime Scene Investigators (CSI). The Unit assists the Indiana Law Enforcement Academy (ILEA) in certification of CSIs from departments throughout Indiana. The Crime Scene Investigations Section Commander is a member of the ILEA CSI Certification Board. The Unit also provides specialized training to other agencies upon request. Members of the Unit regularly provide instruction at both the ISP Recruit Academy and the ILEA Basic Courses.

The ISP Evidence Management System Quality Assurance Program annually audits each of the 14 ISP Districts, as well as the Indianapolis Regional Laboratory. The three Districts located at Evansville, Fort Wayne, and Lowell also have a Regional Laboratory. A complete inventory/audit is conducted every two years at each of the Laboratory Division's evidence storage facilities. These audits are a comprehensive review to account for every item stored at the facilities. The Unit is also occasionally requested to audit a local law enforcement agency's evidence system. These audits are completed only when there is a criminal investigation involving internal issues with the physical evidence stored at the location.

As part of the quality assurance program to ensure competency and properly functioning equipment, the Unit semi-annually assesses the work of all ISP CSIs. In addition, each CSI is given a proficiency test annually under the supervision of the Unit. In 2021, the Crime Scene Investigations Quality Assurance Unit made significant contributions in maintaining crime scene accreditation including reviewing and updating procedures, and monitoring to ensure compliance with accreditation requirements.

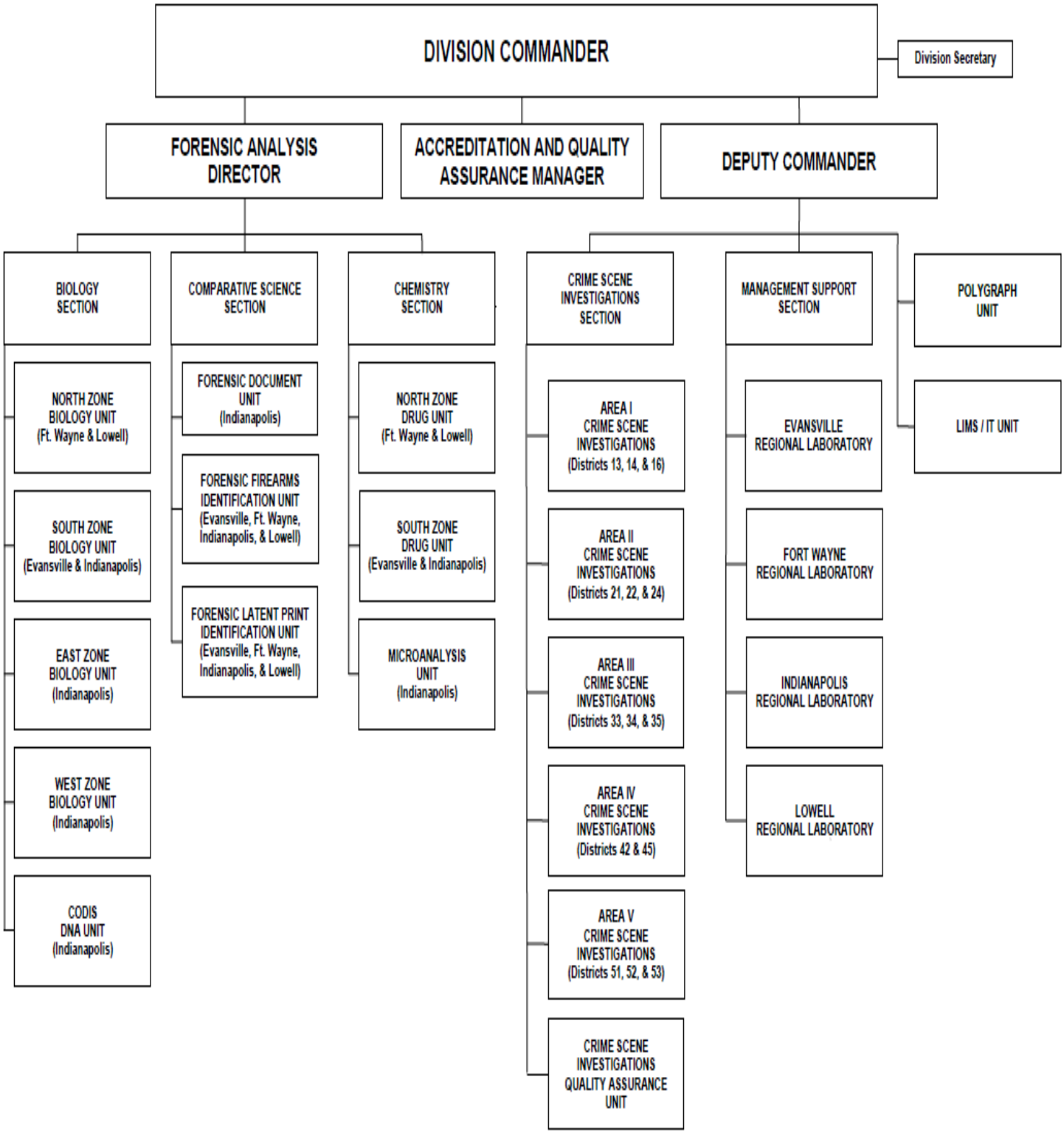
The **Laboratory Quality Assurance Unit** (1 staff) ensures compliance to laboratory and accreditation quality assurance standards. The Unit maintains updated and secure quality assurance documentation, oversees the implementation and continued corrective action compliance, ensures laboratory adherence to proficiency testing and witness critique requirements, and develops and conducts quality assurance related training for Laboratory Division staff. The Unit also assisted the Crime Scene Investigations Quality Assurance Unit with maintaining accreditation of crime scene services and the District evidence storage facilities.

The Laboratory Division is accredited by the American National Standards Institute (ANSI) National Accreditation Board (ANAB). Accreditation is a voluntary program in which a crime laboratory that participates must demonstrate that its management, personnel, operational and technical procedures, equipment, and physical facilities meet established international quality requirements.

The **Laboratory LIMS/IT Unit** (2 staff) has the primary duty of maintaining and administrating the Laboratory Information Management System (LIMS). The LIMS Unit tracks all evidence currently held by the ISP Laboratory Division and stores analytical results, records, and reports. This system is integrated with the web based reporting system iResults, which provides the Certificates of Analysis (reports) to law enforcement agencies and county prosecutors.

The LIMS/IT Unit supports Laboratory Division personnel at the four Regional Laboratories and 14 District locations. The Unit provides assistance with maintaining and troubleshooting other systems used by Laboratory Division personnel, that include Automated Fingerprint Identification System (AFIS), Combined DNA Index System (CODIS), Integrated Ballistics Identification System (IBIS), SoleMate Footwear Print Identification System Footwear Print Expert (FPX), analytical instrumentation, camera surveillance, door access/security, and phone systems. The Unit also maintains and supports a digital workflow system (Mideo®) utilized by the Document, Latent Print, and Microanalysis Units, and the digital asset management system (Axon Evidence.com) employed by the Department.

Organizational Chart



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Visit the Laboratory Division's website for Evidence Protocols and Forms, Test Methods, CODIS and Drug Stats and Information, Training Opportunities, and many more resources.
https://www.in.gov/isp/labs/